

Assessing the Effects of Pharmacist Education on Colorectal Cancer Screening and Access to a Stool-Based DNA Test

Madysen S. Moore, PharmD^{1,2}, Janelle F. Ruisinger, PharmD, FAPhA¹, Lesley M. Johnson, PharmD², Brittany L. Melton, PharmD, PhD¹

¹University of Kansas School of Pharmacy, Lawrence, KS

²Balls Food Stores, Hen House Pharmacy, Olathe, KS

BACKGROUND

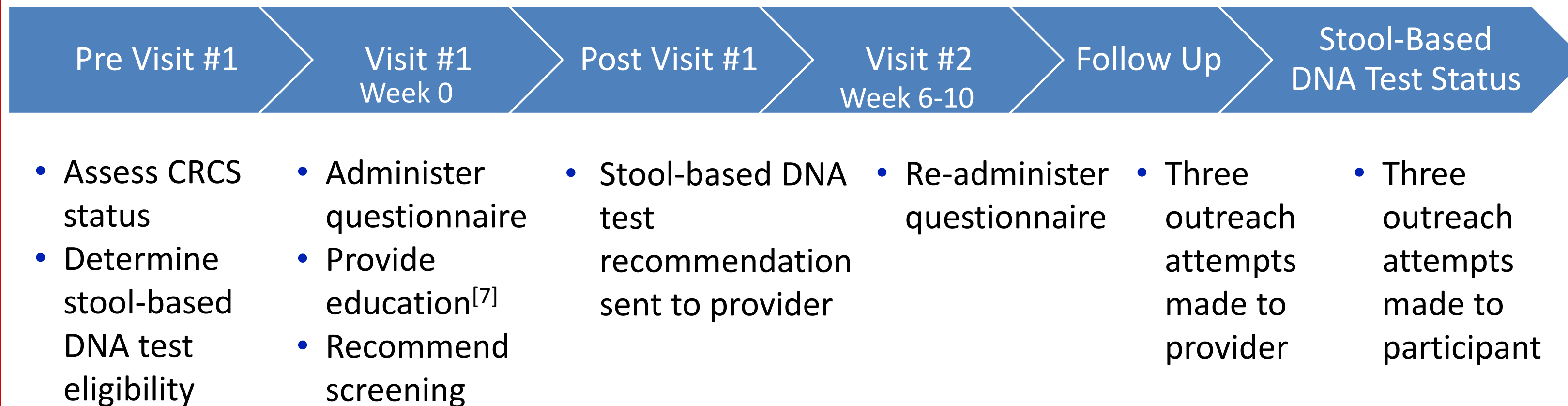
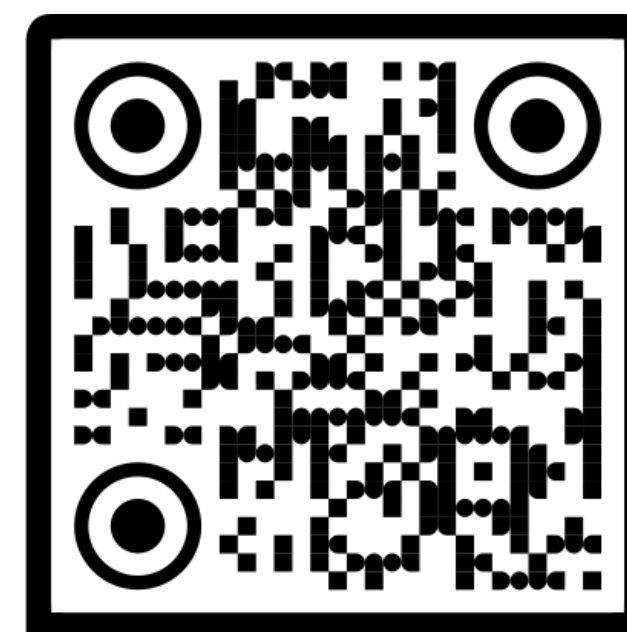
- Colorectal cancer is the third most common cancer diagnosed in both men and women in the United States^[1]
- Deaths from colorectal cancer in people younger than 55 have increased 1% per year from 2008 to 2017^[1]
- The COVID-19 pandemic has resulted in the delay of elective procedures, leading to a decline in colorectal cancer screening (CRCS)
- No data exists regarding modifiable factors such as patient knowledge, attitudes or perceived benefits, barriers, or perception of risk of developing colorectal cancer^[2,4]
- One stool-based DNA test currently exists that can be completed at home in the United States^[3,5]
- Community pharmacists are well positioned to provide education and recommendations on preventive care to the general population

PURPOSE

- Evaluate overall participants' perceptions on CRCS before and after receiving pharmacist-led education
- Compare participants' knowledge and perceived barriers to completing CRCS before and after receiving pharmacist-led education
- Evaluate the impact of a pharmacist intervention on completed screenings using a stool-based DNA test

METHODS

- The study used a modified version of the questionnaire taken from the Behavioral Risk Factor Surveillance System and National Colorectal Cancer Roundtable Toolkit^[6] (scan QR code to view study questionnaire)
- Pre/post questionnaire administered to participants in the Balls Food Stores pharmacist-led chronic disease state management program across 29 locations between October 2021 and January 2022
- The 16-item questionnaire assessed participant:
 - Baseline knowledge (n=7), barriers, perceptions (n=2), and CRCS intentions
 - Demographics
- Questionnaire item types:
 - Multiple response, free response, 4-point Likert scale (1=Strongly Agree, 4=Strongly Disagree)
- Inclusion Criteria:
 - 45 to 75 years of age who completed at least two visits with their pharmacist coach
- Exclusion Criteria:
 - Unable or unwilling to complete the questionnaire
- Statistical Analysis:
 - Demographics analyzed using descriptive statistics
 - Knowledge reported as correct score
 - Stool-based DNA test completion rate reported as overall percentage
 - Performed using SPSS v.27 with an a-priori alpha of 0.05
 - Chi-square and Wilcoxon Signed Rank tests used to assess pre/post perception changes
- Study Design:

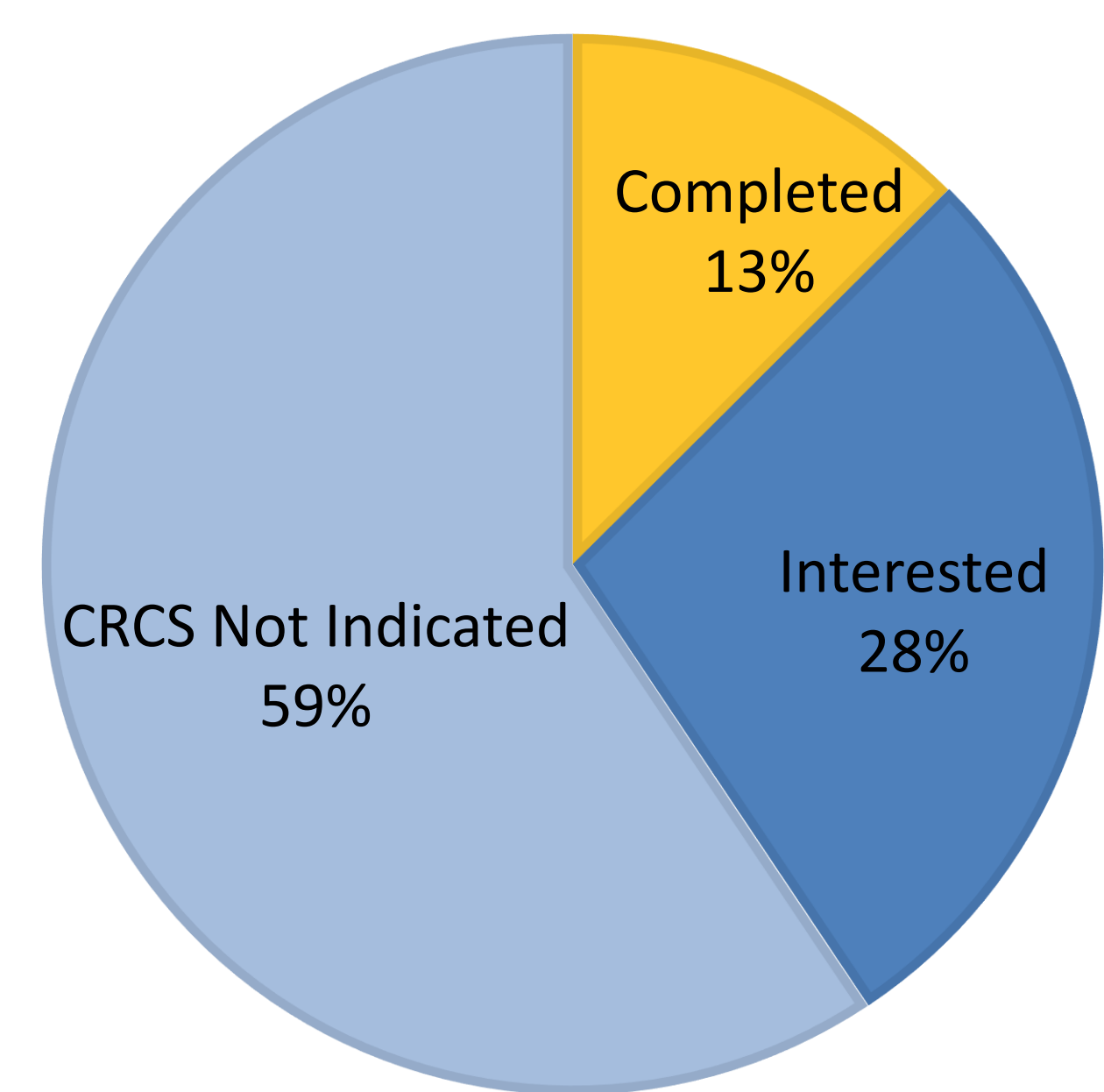


University of Kansas Medical Center Human Subjects Committee granted exemption for this project

RESULTS

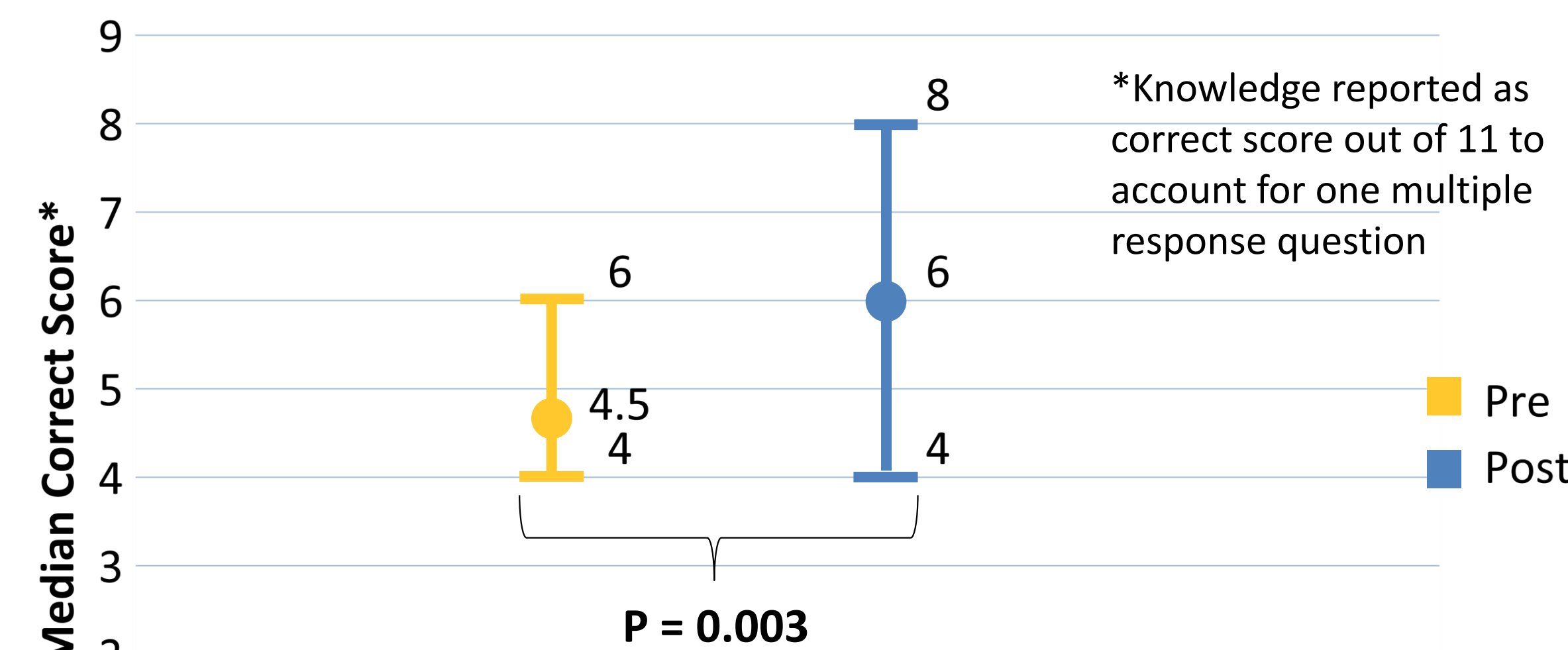
	n (%)
Gender	n=41
Male	21 (51.2)
Female	20 (48.8)
Age (Years)	n=41
Median (range)	59 (52 – 62.5)
Race	n=39
White	33 (84.6)
Asian	3 (7.7)
Black or African American	3 (7.7)
Ethnicity	n=40
Not Spanish, Hispanic, Latino	34 (85)
Spanish, Hispanic, Latino	6 (15)
Education	n=41
Some High School	7 (17.1)
High School/GED	14 (34.1)
Some College	13 (31.7)
Undergraduate Degree	5 (12.2)
≥ Master's Degree	1 (2.4)
Prefer not to answer	1 (2.4)

Figure 1: % of Participants That Completed the Stool-Based DNA Test After Pharmacist Intervention (n=23)



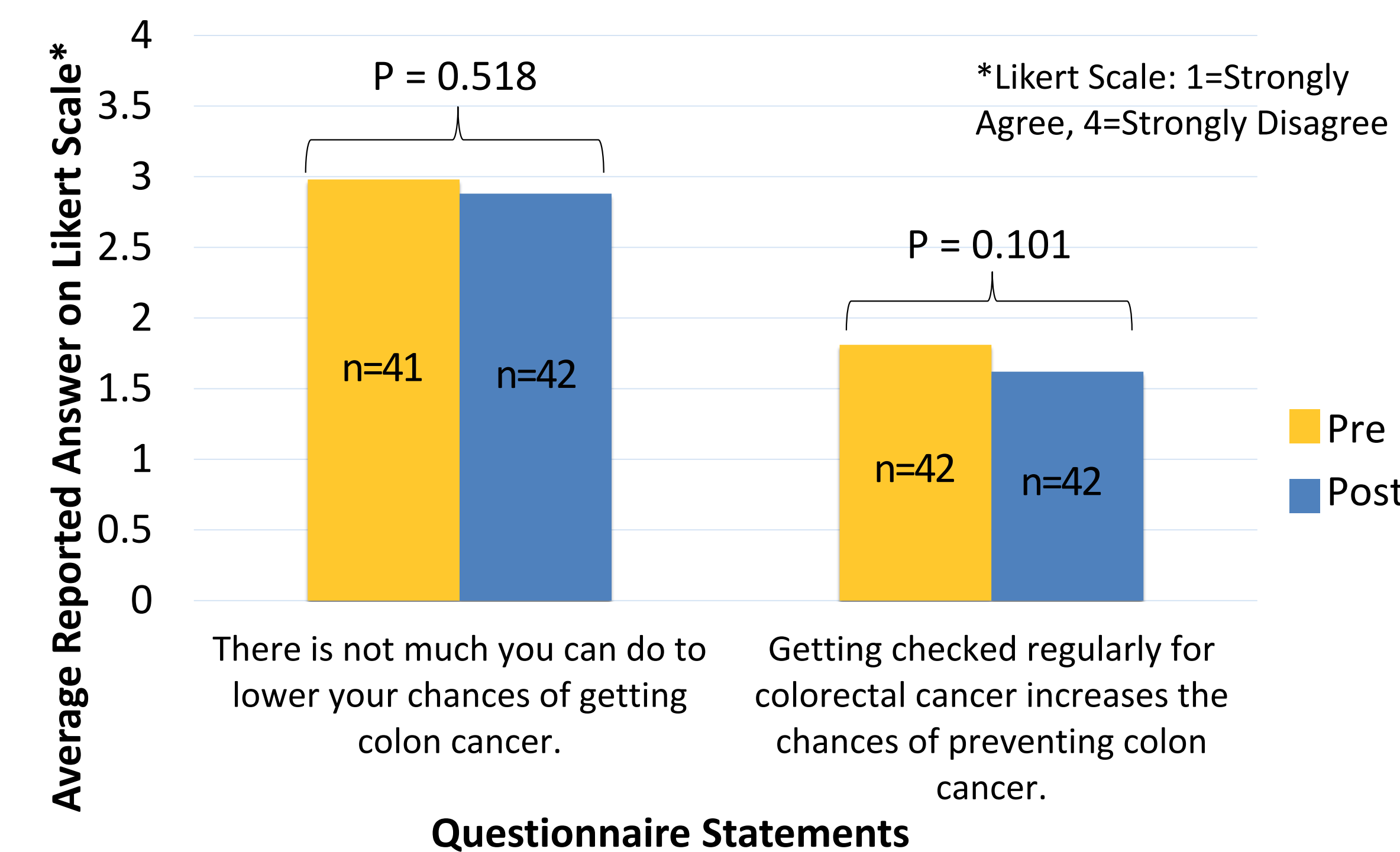
*1 additional participant received the test kit, but completion status was undetermined during data collection

Figure 2: Change In Knowledge Pre- and Post-Pharmacist Education (n=42)



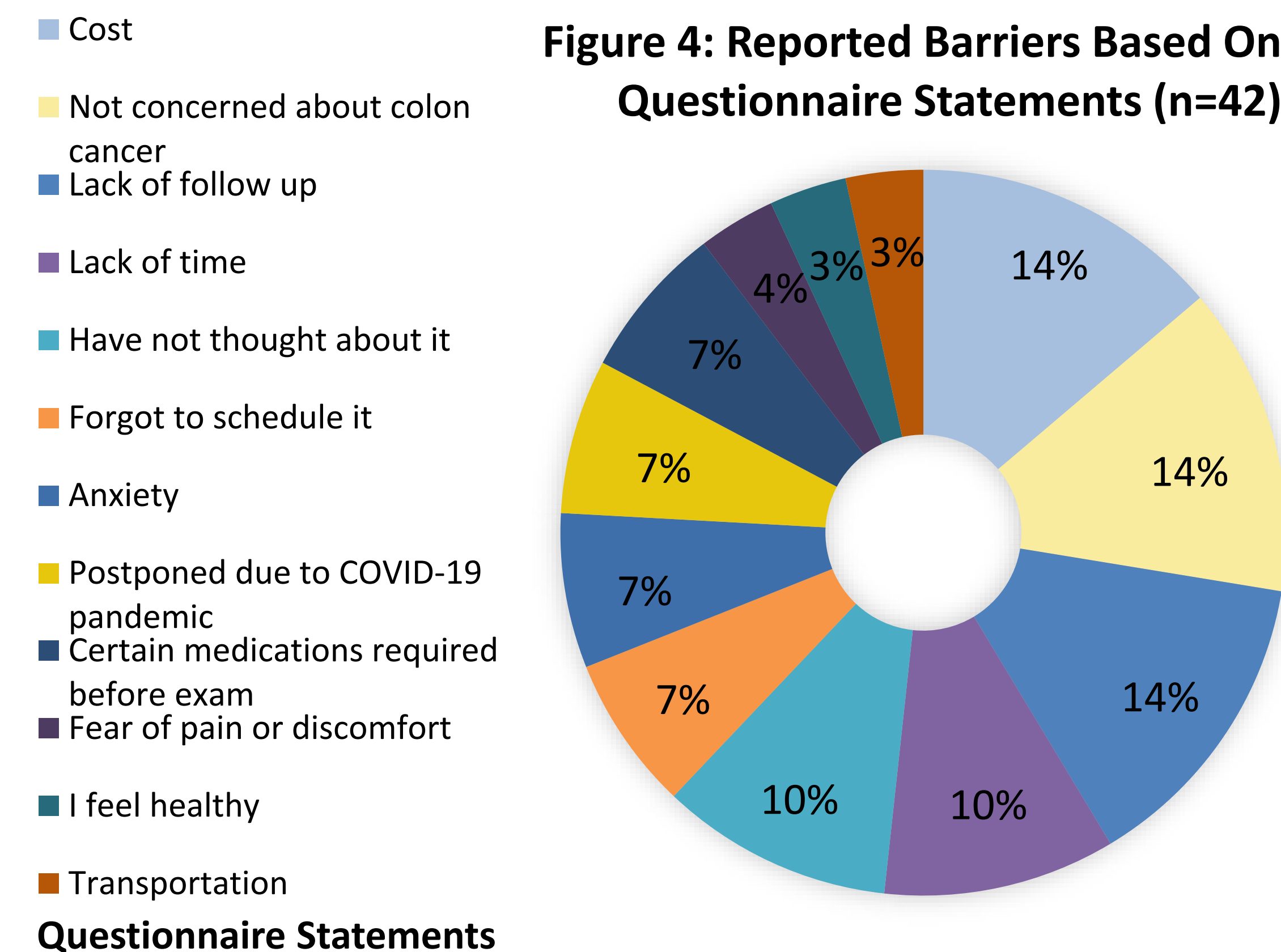
*Knowledge reported as correct score out of 11 to account for one multiple response question

Figure 3: Change in Perception Pre- and Post-Pharmacist Education



*Likert Scale: 1=Strongly Agree, 4=Strongly Disagree

Figure 4: Reported Barriers Based On Questionnaire Statements (n=42)



LIMITATIONS

- Small sample size
- Study population lacked diversity
- Inclusion of participants already enrolled in a pharmacist education program may have potentiated a health bias
- Inefficient communication methods to recommend the stool-based DNA test
- Limited sample size eligible for the stool-based DNA test

CONCLUSIONS

- Pharmacist-led education increased participants knowledge of CRCS but did not change perceptions
- Barriers reported did not change after pharmacist-led education; however, this data provides insight on modifiable factors that could increase screening rates in the future
- Consistent with prior studies, community pharmacists can improve screening rates by providing education
- Future studies should address the efficiency and workflow of a screening initiative in the community setting

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PANEL DISCLOSURE

- All authors of this presentation have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation

SUPPORT

- American Pharmacists Association Foundation 2022 Incentive Grant